

~~SECRET~~

THE INTELLOFAX SYSTEM

In providing a central reference service to CIA and the intelligence community, the early managers recognized the need to develop a machine capability for indexing and retrieving ~~(storing)~~ ^{or what was later to become document delivery was not} ~~one of the early problems tackled~~ a staggering quantity of intelligence documentation. The resulting Intellofax System was unique-- no other government agency, no university or library, and no commercial firm had anything of its type in operation.

later
Its name was coined by Dr. Andrews to describe a system which combined IBM [techniques] and facsimile reproduction techniques for for the indexing and retrieval of intelligence documents.

authority for establishing
The actual the system (not given the name Intellofax until 1947) appeared in an ORE Instruction # 31-47, entitled Functions of the Reference Center, dated 15 July 1947.

25X1A9a

[redacted], Assistant Director of ORE, charged the Central Index and the Intelligence Documents Division (the Library) to (1) "index, by business machine procedures, the subject matter of all available reports, and other documents of a foreign intelligence nature" and (2) classify and catalogue all intelligence documents of a foreign intelligence nature available to CIG."

25X1A9a

[redacted], Chief of Central Index, was given the responsibility for organizing and developing the initial essential steps toward establishing a central indexing and filing system, in conformity with an ICAP ^{sub} recommendation in March 1947. It soon became apparent that no existing equipment would be capable of meeting the needs envisaged. Although an IBM punch-card offered great flexibility and speed in the handling of thousands of cards, each of which would represent a particular intelligence document, no card would carry enough printed data to supply the researcher with titles and descriptions of documents. [redacted] met

25X1A9a

25X1A5a1

with top management of [redacted] to discuss the possibilities of the use of standard [redacted] machines and the adoption of these machines to the documentation problem. A [redacted] said that his company would be willing to cooperate with IBM in adapting the Telefax

25X1A5a1

25X1A5a1

~~SECRET~~

GROUP 1
Excluded from automatic
downgrading and
declassification

Approved For Release 2001/08/01 : CIA-RDP84-00951R000300040009-8

~~SECRET~~

25X1A5a1

At the same time that test runs were being made on the

25X1A9a

investigated the potential uses and availability of thermo-printers which would reproduce printed, typed, or written data by a heat process.

25X1A5a1

X1A9a

Memo from [redacted] to

Acting Management Officer and Acting AD/OCD

7 June 49

(Mach Div 47-55 Box 60-548/1)

was responsive to OCD's urgent need for this type of equipment and agreed to build and demonstrate a prototype of the machine by July 1949. This was the basis for the first Intellofax tapes printed continuously onto thermofax paper.

Memo from JMA to Chief, Support Staff & Chief, Commo Div. 9 May 50

As of 15 May 1950, the special Faxcard equipment of 6 transmitters and 12 receivers had been delivered to be installed in [redacted]

25X1A6a

The early OCD managers had hoped to electronically

transmit the Intellofax tapes to requesters. As of 15 May 1950

6 transmitters and 12 receivers had been delivered to be installed in [redacted] which

The IBM punched cards were reproduced by Facsimile machines onto tapes which would be fed into the

transmitter and electronically sent to the receiver. Experimentation continued throughout the summer months of 1950, but the system was never a success with too many technical and human problems.

Requesters who were originally enthusiastic about receiving

bibliographies (Intellofax tapes) right in their office (the forerunner of on-line computer retrieval) later became less than enthusiastic

and opted for receiving them from the Library retrieval channels.

The original Intellofax tapes made by the 3-M machines were never

completely satisfactory because of the quality of the thermo-fax paper.

~~SECRET~~

The paper was thin and tore easily, and the copy was not always legible.

Part of OCD's move to the [redacted] in April 1952 necessitated the installation of secure lines for facsimile transmission from the Machine Division to the Reference Branch of the Library which remained in "M" Bldg.

longer used

GROUP 1
Excluded from automatic
downgrading and
declassification

When replaced by a PRT machine which prints white on black paper

SECRET

The Development of the Intelligence Subject Code (ISC)

In conformity with ICAPS* wishes (~~March 1947~~), steps were also taken by the Central Index to prepare a unified subject classification scheme. ^{25X1A9a} [redacted] wrote to the Chief, Index Branch, in July 1947:

"Although the Reference Branch has taken the initial steps in the direction of establishing central indexing and filing procedures, any unified acceptance of the end product of these investigations will depend upon joint action of IAB and CIG representatives and the agencies final acceptance of the system decided upon." (Machine Div 1947-48 Box 60-548/1) 6/

^{25X1A9a} On 14 July 1947 [redacted] entered on duty as Chief of the

Classification Unit of the Library ^{Intell. Document Division} to work with the Central Index in developing a comprehensive subject classification schedule for CIG. ¹⁾ →

in the G-2 Library in Vienna, for example) was not adequate; the subjects listed in the BID were not sufficiently comprehensive to cover the wide range of subjects in intelligence documents, since it had been devised for Army purposes. The economic, political and scientific sections were woefully weak. It was decided to prepare a list of subjects which would include those contained in the BID, the Navy Monograph Guide, State Department ^{the abridged Dewey decimal system used by the} Classification, and for scientific subjects, the Voge Classification, prepared and used by the Joint Research and Intelligence Board (JRBD). Visits ^{Mr. Butler and Mr. Morris} were made to the parent organizations using these "classification" schemes.

^{25X1A9a} ^{Mr. Butler} Army and Navy representatives worked on the military subject, trying to eliminate duplication. [redacted] ^{at JCRD} was brought in from JRBD to work with Theodore Wagman and Dorothy Randolph of the Library ^{to} to help develop the scientific subjects. ^{this paper of 5 January}

^{25X1A9a} By [redacted] Classification Unit had completed a general framework of an all-inclusive classification schedule. ^{with the assistance of} The major subject categories included: Army, Navy, Air, Economic, Political, Sociological, Scientific, Geographic, and Biographic. On 22 August a familiarization meeting was held with duly appointed representatives

Intell. Doc. Div. (Ly) of the three services. The participating IAB agencies agreed to develop Monthly Status Rpt 28 Aug-28 Sept 47 and/or revise their respective military categories in the BID. To those (Library 1947-48) categories would be added the CIG contribution consisting of the non-military subjects. ^{Because} The War Department was not inclined to change the numbering system of the BID; it was to be used as the nucleus of the new classification system. 8)

SECRET

GROUP 1
Excluded from automatic
downgrading and
declassification

~~SECRET~~

25X1A9a

25X1A9a
Ltr from8 Sept 47
(Box 60-
548/1)

██████████ was not very enthusiastic about the cooperation from the other agencies. He and ██████████ had visited the State Department 25X1A9a Librarian, who welcomed a comprehensive expansion of the Army, Navy, and Air subject classification, but felt that this expansion should be 25X1A9a incorporated into the abridged Dewey. ██████████ stated to ██████████ in 25X1A9a September that experience to date with the representatives of the IAB agencies had not been too satisfactory, for they seemed to feel that what CIG was trying to do with a new classification would replace the classification which each agency was using. This was, of course, it the ultimate aim, but would not be realized even partially until the Air Force adopted the Intelligence Subject Code in 1954. Each representative took a cosmic view of the fields which were of primary interest to his agency, and argued that the whole structure of intelligence would be imperilled by any deviations from his schemes. 9/10

So the Library set about continuing with its own scheme.

~~SECRET~~

GROUP 1 Excluded from automatic downgrading and declassification

~~SECRET~~

ISC
master
copy

edition
The first of the Intelligence Subject Code ~~appe~~¹ was dated 15 March 1948. The Preface indicated that the edition was provisional and that the subject headings were intentionally kept rather general so that expansions and revisions could be made as experience required. There was no index to the ~~1st~~ this first edition of the ISC. A biographic or "Who's Who" class which was in the original outline was deliberately omitted because of the Biographic Intelligence Register of the Reference Center. ~~Suggestions, additions, and comments~~ were earnestly solicited. The main classes and the number of notations (codes) were:

000	International Situation	32
100	National Affairs	120
200	Army	139
300	Navy	181
400	Air Force	83
500	Weapons and Scientific Warfare	44
600	Science and Technology	82
700	Geography and Economics	232
800	Social and Cultural Forces	<u>67</u>
Total		980

Each of the eight categories was broken down to provide, as nearly as possible, for the needs of the agency chiefly concerned-- the Army, Navy and Air sections following closely the patterns developed by the three services for their own use. The other sections had been worked over in detail with the ORE units chiefly concerned.

Chapters 100 through 800 retained their overall subject ~~category~~ ^{outline} until the complete revision of the ISC in November 1960.

Further chapter sub-divisions appeared throughout 1948, but it was

not until ~~the~~ November 1948 ^{that} ~~the full six digit capability of the ISC was used.~~

^{but the 700 section was expanded to the full six digit capability} A relative index

(alphabetical index) was printed at the same time.

~~SECRET~~

GROUP 1
Excluded from automatic
downgrading and
declassification

~~SECRET~~

Suggestions, additions and comments were earnestly solicited. Analysts of ORE/ORR and OSI played a significant role in the continuous revision process during the first five years, ensuring more effective organization of the information in documents. These analysts pointed out deficiencies in certain subject fields and suggested appropriate changes. Most suggestions benefited and improved the ISC; others reflected only parochial needs of insistent and narrow-in-outlook requesters who raised their subject specialty out of all proportion to the entire scheme. A prime example of the latter type of requester made one section of the ISC look ridiculous: the subject code for Plant Pathology (632.4) was sub-divided into 68 different codes for wheat, rye, barley, oat and miscellaneous crop diseases with the name of the diseases in English followed by the scientific term in Latin.

The 1949 ISC resembled the original 1948 edition only in the 8 major chapter headings. Within each chapter much restructuring took place. A new heading for Communism was added and the 11b section became the most widely used throughout the book. *Geography was moved from the 700 chapter to the 600 chapter.* In 1950 at the time the Library decided to catalog books according to the ISC a 900 chapter (Organization of Information) was added.

The ~~history~~ history of the ISC from 1948 through 1967 was a history of change and hoped-for improvement. A review of the master copies of the ISC ~~revealed~~ during these years reveals pages of changes. ~~A~~ New ^{were} editions ~~was~~ published in 1954, 1957, ~~and~~ 1960, 1962, 1964 and 1967. Changes in ^{subject} codes necessitated ^{the preparation of} ~~repunching of~~ new cards for ~~conversion~~. The printed information was transferred ~~through a heat process~~ ^{by means of a heat press, whereas the} from the old card to the new card, ~~whereas the codes~~ ^{lofax file} punched data was converted by machine to the new codes. This was a time consuming process and caused backlog in the Machine Division.

~~SECRET~~

GROUP 1
Excluded from automatic
downgrading and
declassification

All classification schemes have limitations and the ISC was no exception, particularly since ~~the IBM card limited code~~. *The library personnel always worked closely with the machine personnel before anything was adopted.* As mentioned earlier, the full 6 digit expansion of the 700 chapter went into effect in November 1948. By 1950 it became evident that ~~certain aspects might be uniformly~~ *almost all the* ~~action codes which could be applied to the commodity~~ *in that chapter* subject codes ~~were necessary~~. These "actions" were such things as replacement production data; imports-exports; maintenance, repair, and construction; procurement, etc. They applied to almost any commodity listed in the ~~700 chapter~~. The indexer entered them on the code sheet by placing a slash between the modifier ~~and~~ and the subject code; ~~e.g.~~ For example, the production of coal was written as 1/735.1. The slash appeared on the IBM card as an overpunch in columns 1-6 (subject code field).

This important change in the coding ~~operation~~ *scheme eventually extended by 1954* ~~some~~ *some* to other chapters of the book. Prefix modifiers as they were called were applied to the military chapters for such aspects as security, vulnerability, sabotage; order of battle; specifications and description (to be combined with equipment codes), etc.

Other ~~coding~~ *coding* devices were inaugurated. The library ~~always worked closely with the Machine Division personnel before any unique~~ *thing* was adopted. One of the subject codes ~~115~~ *115* (Insurgent Groups) was purposely kept without any subdivisions. The impact of ~~the~~ *the* guerrilla warfare in ~~25X6A~~ necessitated some specificity in coding.

One of the subject codes-- 115 (Insurgent Groups)--had no further breakdowns. At the request of ~~ORE~~ *25X6A* desk the following instruction appeared in the 1949 ISC: The 115 code may be combined with the first 3 digits of any classification number throughout the ISC, e.g., Monetary System of the ~~25X6A~~

~~25X6A~~ -- 115.773 **SECRET**

GROUP 1
Excluded from automatic
downgrading and
declassification

in two other instances.
This same method of coding specificity was used for two other codes:

~~117 (Religious and Ethnic Minorities) and 876 (Foreign Languages).~~

A three digit list of languages, minorities and cultures was prepared (Dr. Andrews specialty)

and the 3 digit identification could be combined with either the 117 code for Minorities or the 876 code for languages.

For example, 256A [redacted] minority was coded 117.119 and the [redacted] language was coded 876.119.

~~SECRET~~

GROUP 1
Excluded from automatic
downgrading and
declassification